



## Carpentry Is Intellectual Work

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### **Abstract**

*This article argues that carpentry is as much an intellectual as a physical activity. Terms are defined, the problem is outlined, examples are given, and some general conclusions are drawn for education. Some sketches are provided for graphic illustration of the examples. The interpretation in effect is pragmatic and cites Dewey on occasion to illuminate its views.*

**Keywords:** *Emotions, affect, cognition, Dewey*

I worked as a carpenter before going to college, and during summers and spare time while teaching for 40 years in universities, and now that I am retired, I work as a carpenter again. I love to do carpentry. Today it would be called my “passion.” Joseph Campbell might say it is my “bliss.” To be sure, carpentry can be hard work, especially in the Florida heat and humidity. I like equally well the teaching I have done, baseball, and reading books. But carpentry is a special experience because it embodies so many good qualities.

When I was teaching, and always in need of examples, I used to tell my students that “carpentry is intellectual work.” I would give a brief explanation, but I never took time to work out the idea in detail. Then I told a colleague about it. He also does carpentry and was interested in the idea. He asked if I had written anything about it; if so, he wanted his students to read it, but regretfully I had to say “no.”

Now I want to remedy that. I want to tell why I think the idea is important, lay out some concepts (particularly “intellectual”), explain the activity of carpentry and provide examples for my idea, and draw some implications for education—for teaching and learning. I won’t detail “my life in carpentry,” which would be a long biography, or give “carpentry tips,” though some examples from my own experience will be helpful.

### **Terminology**

When I would tell students that “carpentry is intellectual work,” I could see skepticism in their faces. Like so much other “work,” they appeared to think, carpentry is physical, not mental, activity. There is a teaching moment. The belief shows a common and long-standing tendency in our thinking to separate mind and body. Philosophers have debated this matter for centuries. Everyone notices the physical but seldom the mental or intellectual effort associated with carpentry. The students would refer to roofing, and cement-form building, and framing and truss

making, and laborers carrying lumber and supplies up and down ladders to document their skepticism.

Of course there is physical activity associated with carpentry. That is another reason why I like it. In this I agree with the insight, if not the extent to which they took it, of the Chinese Marxists who believed that intellectuals should be required to do some physical work. It might give them practical insight. In addition, it is good exercise. If you work as a carpenter, you won't have to spend so much time jogging or in the gym.

What does a carpenter do? For my purposes I do not need to be very technical or detailed; a general idea should be enough for my discussion. A carpenter "builds or repairs wooden structures." Distinctions can be made between "rough" (framing) and "finish" carpentry (often called "joinery") and between those who build new structures from plans and repair carpenters.

Reading and following blueprints or plans requires intelligence, of course. Measurement, calculation, and figuring angles and curves—all carpentry activities—require intelligence—and education. It would be easy to make the case that "carpentry is intellectual work" by following this line. But I prefer to do repair carpentry, and odd job and handyman work, which usually follows no blueprint. One time a student working with me asked how we were going to deal with the problem we had been hired to fix. "I don't know," I replied, "we'll figure it out as we go along." It wasn't that we lacked carpentry knowledge, but rather that in the process we would discover unforeseen difficulties—and opportunities. So an explanation of how carpentry is intellectual work will need to go beyond references simply to measurements and calculations or following plans.

As well, what does it mean to be "intellectual?" My claim is that carpentry is intellectual work. This term certainly is more problematic than is "carpentry." Again, philosophers have made careers analyzing the term. An intellectual is thought to be someone inclined toward activities that require reasoning for their understanding and management and often is identified as someone with "great mental ability" or "high intelligence." Identified this way, "intellectual" easily becomes synonymous with theoretical and abstract, which is not my purpose. There is nothing abstract about carpentry; it always has a practical purpose.

What I want to say is that carpentry requires not just physical activity but mental activity as well—that is, intelligence, which may be conceptualized as "the ability to respond adaptively to novel situations." I hope you will see that quality in the discussion and the examples that follow. Carpentry requires knowledge and insight—empirical and logical categories—knowing what to do and what might result from that doing. It also requires "study, reflection, and speculation." With all this, carpentry becomes a creative activity, which is what the meaning of intelligence given above implies. It aims to bring something into being through, among other things, "creative use of the intellect," of reasoning and understanding.

Of course, what I have in mind throughout this discussion is carpentry that is "well done," not crude carpentry, though some degree of intelligence is necessary throughout the craft. Think again about the distinction between "rough" and "finish" carpentry. Imagine the workmen who do each of these, and you should notice a different degree of intelligence required to do the jobs. Manual dexterity—"skill"—also is required to do "good carpentry," but that issue is outside my focus right now.

I mentioned earlier that I prefer to do repair carpentry. My wife calls me "the rot man." I like to take a "problem," in a house or shed, and, as is said in medicine, diagnose and treat—or remedy—it. What is wrong, what might be done about it, how to do it, and what to expect as a

result? Then act on that thinking and revise the thinking (and further action) if necessary. This certainly is intellectual activity, not abstract, but an “intellectualizing” of activity. It is, in fact, what John Dewey calls “the general features of a reflective experience” (and which others call “problem solving”) and has the same features and process in carpentry that he outlines as thinking in general.<sup>1</sup>

If carpentry was primarily physical activity, what would be called for immediately in any job would be to bang at it with the hammer or hack at it with the saw. But wait: think about it before you do that. (“Proceed with care and caution,” one of my students said he had learned when working with me as a carpenter.) Is there an electric wire or a water line inside the wall? Will the wall or roof collapse if a stud is cut? Is a proper replacement part available, or will you have to make a substitute? Whatever is the case certainly will mean that a different remedy will have to be taken.

When my wife says she would like to have something changed around the house, my usual reply is, “well, let’s see. Before that can be done, this will have to be done, and before that, then that, and that, and that.” This could be interpreted that the husband doesn’t want to make the change. But for the carpenter, it is an “intellectualizing” of the problem before “actualizing” a solution. (Somewhere in his monument of writing, Dewey warns that action terminates thought.) It is, in fact, an example of the more abstractly-stated philosophical principle of pragmatism: an attempt to control, or direct, a process—in this case carpentry—by considering the likely results from acting on it. (Does this mean that I should re-title my paper to read “Carpentry as pragmatic practice”? Two perceptive reviewers of this paper have noted its pragmatic tenor and its continuing references to Dewey and have suggested I retitle it accordingly. That is a compliment, but since my main purpose focusses on carpentry, and is not to explain pragmatism or Dewey’s philosophy, I will retain the original title.)

### Examples

Another way to explain that “carpentry is intellectual work” is to give examples from its practice that show it to be intellectual work.

One job when I worked on a carpentry crew was to build large buildings—chicken houses that were a hundred feet long, 35 or 40 feet wide, and two and three stories high. To begin, it was necessary to be sure that the buildings would be square. (Level and plumb (“vertical level”) also are the carpenter’s concern.) Our only tool for squaring the buildings was a “framing square” that measures two feet on one side and 12 inches on the other side. Used in a corner, such an implement could give the impression that the building was square (“in square,” carpenters say), but when followed for a hundred feet, the sides of the building could be “out of square” because of a slight variation that comes when using too small an implement in too large a space. (See Figure 1 for this contrast.) What to do? Today carpenters use a transit—a surveying tool—for squaring, and leveling, and plumbing, which means that if I was doing this work today I might not get the experience and insight I am about to reveal to you. But in “the old days” or when working on a small crew, we needed another way to be sure the building was square.

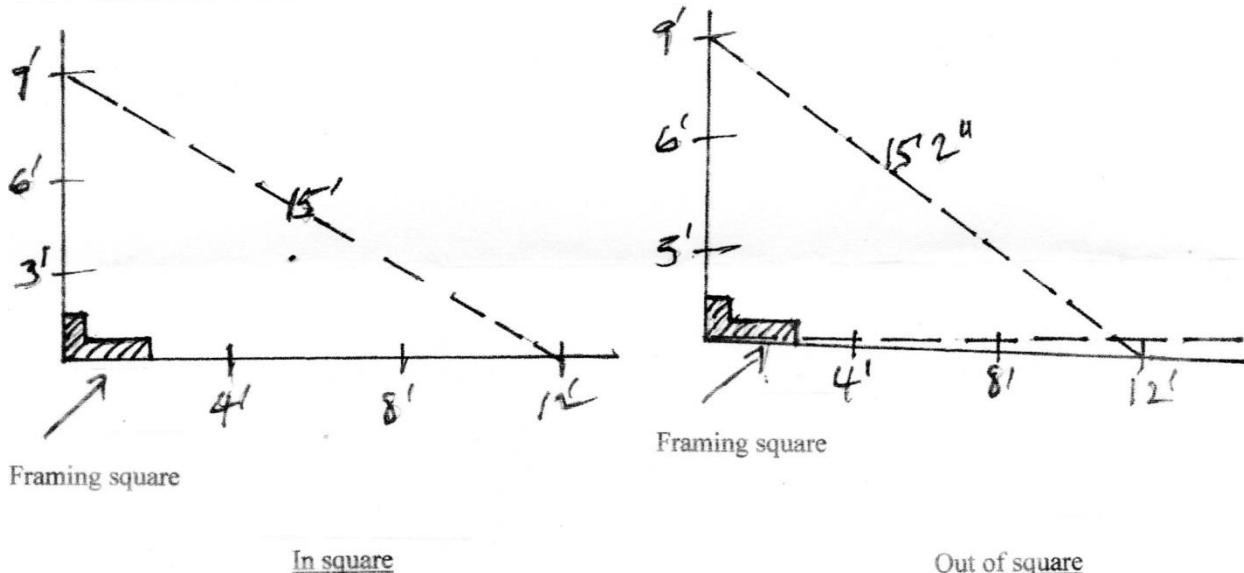
It so happened that we had a rule for squaring, which we called the “3, 4, 5 rule.” Measure 3 feet down one side of the building or any multiple of 3 feet (e. g., 6, 9, 12), and 4 feet down the other side or the same multiple of 4 feet (e. g., 8, 12, 16), and if the diagonal between those

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1. See John Dewey, *Democracy and Education* (New York: Free Press, 1916/1997). Chapter 11, “Experience and Thinking.”

two points is 5 feet or the same multiple of 5 feet (e. g., 10, 15, 20), the building is in square. (Again see Figure 1 for examples of “in square” and “out of square.”)

Figure 1: Squaring the building



It works like magic. If the building was not square, we could adjust the sides until the diagonal measurement showed it to be in square. Anyone could do it, though few could explain why it worked.

Then one day I had an epiphany. At the time I had no more education than anyone else on the crew. I had finished high school, but probably what is different is that I had taken the “college prep” course and had studied mathematics and geometry. It suddenly occurred to me that I had seen this carpentry rule in other guise while in school. The rule is, in fact, the Pythagorean Theorem for determining the length of the hypotenuse of a right-angle triangle. You know, the square of one side, plus the square of the other side, is equal to the square of the diagonal (or hypotenuse):  $a^2 + b^2 = c^2$ . So, applying the “3, 4, 5 rule,” 3 squared (9), plus 4 squared (16, for a sum of 25), equals 5 squared (25). The building was in square.

I had recognized something intellectual about carpentry. Later on, when we were building a Quonset-type building—a half-moon shape—studding and dry-walling the inside rooms, the other workers on the crew would decline to cut the angles and curves, wanting me to do it, because, they said, I “understood these things.”

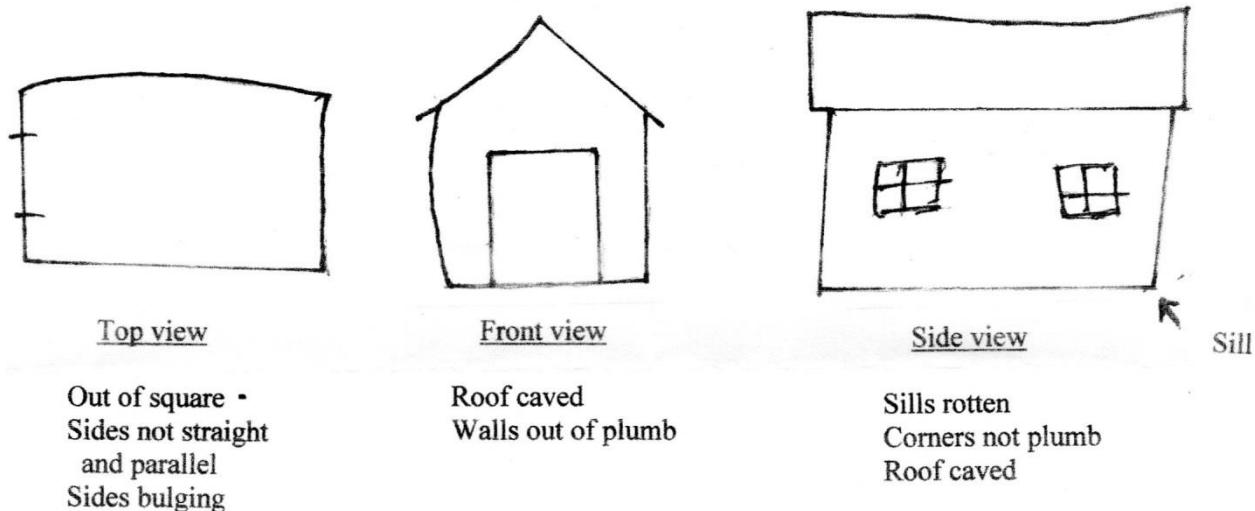
Here is another example. A few years ago I taught a graduate course about John Dewey’s philosophy at a state university. At the same time I was living with a friend and his family, where I had agreed to rebuild his garage for my room and board.

The critics and some of the students in the course fault Dewey for not having an absolute grounding for his philosophy. It “free floats,” they complain, and they believe that especially in morals, thought (and action) must have some kind of absolute justification. Such justification, or

a “foundation,” may come from religion, or natural law, or logic, or something else. Our study was Dewey’s *Logic: The Theory of Inquiry* (1938)<sup>2</sup> in which Dewey formulates a different conception of and role for logic that shuns—indeed, rebuts—this belief. I thought then, and still do, that Dewey’s *Logic* is a great book. It certainly is a difficult but a worthwhile study. We studied hard, but some students still were skeptical. They still could not understand how a system of thought and practice could function except on an absolute foundation.

At the same time, I said, I also was rebuilding the garage. It was nearing collapse. The sills were rotten, the walls were bulging and out of plumb and square, and the roof was sagging and leaning away from the walls. Our job was to replace the old materials and straighten and strengthen the building. (See Figure 2 for an illustration of the condition of “the old garage.”)

Figure 2: The old garage



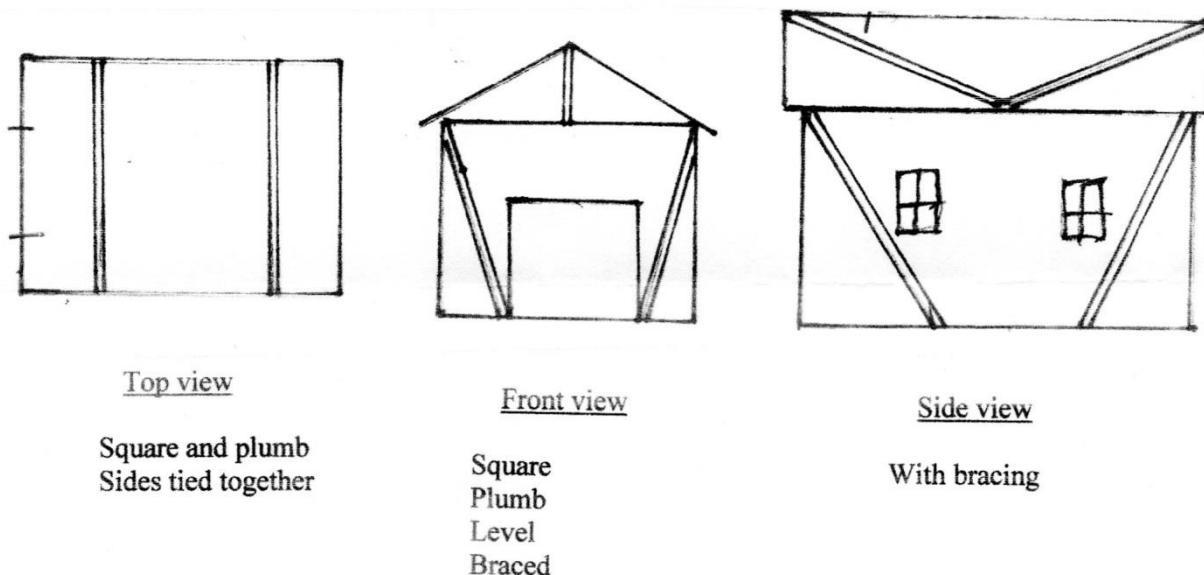
But how could we get the building square, and plumb, and aligned all at the same time? There was no single point to which we could anchor and then reconstruct the rest of the garage. We could tie to a nearby tree, I suppose, but the tree might blow down (as it later did, by the way, demolishing the building again). Or we could anchor to a boulder in the ground or to a concrete pier, but none was available. And so on.

Here is what we did. We squared the building using the “3, 4, 5 rule.” Then we brought the two sidewalls into line (parallel with each other) and tied them together with a long piece of lumber. Then we plumbed the walls and braced them in each corner (four corners, eight braces) to be sure they would not fall back out of square and plumb. Finally, we attached the rafters and brought them into line vertically with the front and back walls and secured them in place with diagonal braces from top to bottom. The building now was square, plumb, aligned, and stable.

2. John Dewey, *Logic: The Theory of Inquiry* (New York: H. Holt and Company, 1938).

This example still might seem to be complicated, though I have tried to make it simple and keep it brief. (See Figure 3 for the reconstructed “new garage.”)

Figure 3: The new garage



The point is that nothing in the building depended on an absolute grounding or certainty. The building stands on its own—“four square,” we could say, and stable—because all its parts are tied together into a firm structure.

You will grant, I hope, that intelligence is required to figure this out. My claim, though, is not just that carpentry requires intelligence, which it certainly does, but that it is an intellectual activity itself. From the practice of carpentry, we might get an insight into other intellectual concerns. The next day back in class, it suddenly occurred to me to use this example from carpentry to explain again Dewey’s philosophy. It made a difference—not that everyone now agreed, but at least they saw the point. What need is there for an absolute truth or morality when ideas—recorded in history, philosophy, science, and literature—are brought together to form a strong conception—a theory, if you will? When one part of the conception is found to be in error (“rotten,” to use the carpentry example), other parts may support it while the errors are mended. Moral thinking is no different. Human knowledge, and hopes and aspirations, and rational (that is, logical) thinking is enough to ground morality.<sup>3</sup> Carpentry confirmed this for me.

One more example. A few weeks ago a helper and I were called to a house that needed repairs. Rain on the roof had seeped into the eaves and had rotted the corner trim boards where they could be seen on two sides above the entry door. The owners wanted to sell the house, and this would have to be fixed before they could do so. We determined that the repair was not structural, but was more about appearance, and told the owner we would return in a few days to make the repair.

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3. See John Dewey, *Logic*, especially Chapter V, “The Needed Reform of Logic.”

Then we began to think about it. The rot could not simply be cut away and replaced with a new piece because there was nothing behind it to which a new piece could be attached. Also, the repairs to be made were in a rather inaccessible place. The roof, down which the rain coursed, was butted against the side of the building; the rain was getting behind the boards and never drying out, instead rotting and crumbling and creating the unsightly mess.

Detective work was called for. (That is an intellectual image.) It occurred to us that in order to make repairs that would not in time rot again, we had first to find the *cause* (or the source) of the problem. I will spare you the details of our search and findings, as you are, I hope, more interested in the intellectual point rather than the experience itself. The point, to repeat what I have said in previous examples, is that we had to think ahead to what would result if we did or did not make repairs in a certain way, and that thinking required us not only to find the cause or source of the problem but controlled what we possibly could do about it. Once the cause was determined, we could make repairs that would resolve the problem for now and in the future. Any other kind of repairs would be cosmetic and, as those who use cosmetics know, they would in time have to be redone again and again.

### Comments

What follows from these ruminations about carpentry? One thing is that there is no antagonism—opposition—between physical and mental activity. That is a point I started with. Rather, they cooperate, to greater or lesser degree, depending on the work to be done. In carpentry, sometimes the work requires more physical than intellectual effort, but at another time what is required is to think about the difficulty before taking action.

When I say “carpentry is intellectual work,” I do not deny it also is physical activity. (On the other hand, to emphasize its physical character obscures its intellectual attributes—which is what motivates this paper.) At the beginning of the paper, I surveyed the meaning of “intellectual” and put it aside until now. There is another meaning of intellectual that implies “developed or chiefly guided by intellect rather than by emotion or experience.” This too might suggest that if carpentry is intellectual work, there is little that emotion and experience would contribute to it. But this is not the case. I have argued in another place that emotion is an indication of interest and a motivator of thought.<sup>4</sup> So it is a natural part of intellectual activity.

Similarly, it would be foolish to say that carpentry does not build (to use a pun) on experience. As in other professions, one is unlikely to be successful without practice—that is, without experience. It is well to remember, though, again as Dewey warned, that it is not simply practice, but intelligent practice, that makes perfect.<sup>5</sup> So once again we see the contribution of intellect to what so often is thought to be solely physical activity.

It is not that the carpenter constantly thinks about the act of carpentry all the while he is on the job. The job has to get done. The time to think about it is when planning the job or when difficulties are encountered. Thinking “qualifies” (or “requalifies,” Dewey would say) the experience. Whenever I have a carpentry job to do, I usually I tell the home owner, “I can’t get to it for a few days.” This gives me time to think about the problem and possible solutions. But then it comes time to put the solutions into practice.

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4. See Robert R. Sherman, “Philosophy with Guts.” *Critical Questions in Education Volume 5, Issue 2* (Summer, 2014): pp. 68-74.

5. Dewey, *Democracy and Education*, especially Chapter 20, “Intellectual and Practical Studies.”

In these remarks I do not mean to say that carpentry is unique from other kinds of experience. The same analysis could be made for, say, baseball or typewriting, two other activities with which I have had experience. A baseball player who thinks about making a play likely will commit an error. (Of course, errors may be committed for other reasons as well.) But once an error has been made, the player should think about its circumstances and make revisions through practice until he can execute the play without thinking about it—as if it were “natural.” (That is an ironic circularity.)

Similarly with typewriting, which I used to teach. Once you have learned the keys and where to place and move your fingers, the rest of learning to typewrite is practice until one can do it without thinking. To think about every touch of the keys will ensure error—or at least inefficiency. I learned to typewrite 55 years ago. Recently I saw television quiz show that asked what finger of what hand struck the “x” key. I could not answer the question immediately, and even had difficulty thinking about it, even though I have no trouble hitting the correct key when I write. The point is that the time to think about typewriting—to “intellectualize” it—is when the practice does not go well (or when one is learning it). Then the purpose is to reformulate it for efficient practice. Neither of these examples—baseball and typewriting—imply that the practices are not intellectual. They imply rather that, as in carpentry, intelligence is related to the practices in a special way.

A further comment. I have titled my paper “Carpentry is Intellectual Work” deliberately to emphasize *work* and thus to challenge another dichotomy, that intellectual activity is not work. So we are told, for example, that university faculty should not join unions because their profession is not trade union activity—work—but is, rather, mental or intellectual. This again is the dichotomy between mind and body. Anyone who has taught for a quarter- or a half-century knows that using intelligence is work—it requires effort. A good dictionary will reveal that work is “effort to do or make something,” “purposeful activity,” and the like. I particularly like Dewey’s formulation that work is an activity that “consciously includes regard for consequences as part of itself; it becomes constrained labor when the consequences are outside the activity as an end to which activity is merely a means.”<sup>6</sup> I have examples—from carpentry and otherwise—that would illustrate this as well, but I will leave that for another time.

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<sup>6</sup> Dewey, *Democracy and Education*, p. 197.